



DEPARTMENT OF
ECOLOGY
State of Washington

WRAC Water Supply Update

WR Statewide Drought Lead, Caroline Mellor

March 10, 2025

Overview

- 1** Goals for WRAC
- 2** Recap: Drought declaration and process
- 3** Water supply update
- 4** Next steps for ongoing drought management

Drought Emergency Declaration

On April 16, 2024,
Ecology declared a
Statewide drought due to
low snowpack and warm
and dry forecast.

Limited exceptions for
Puget Sound metro areas
with healthy water
storage.

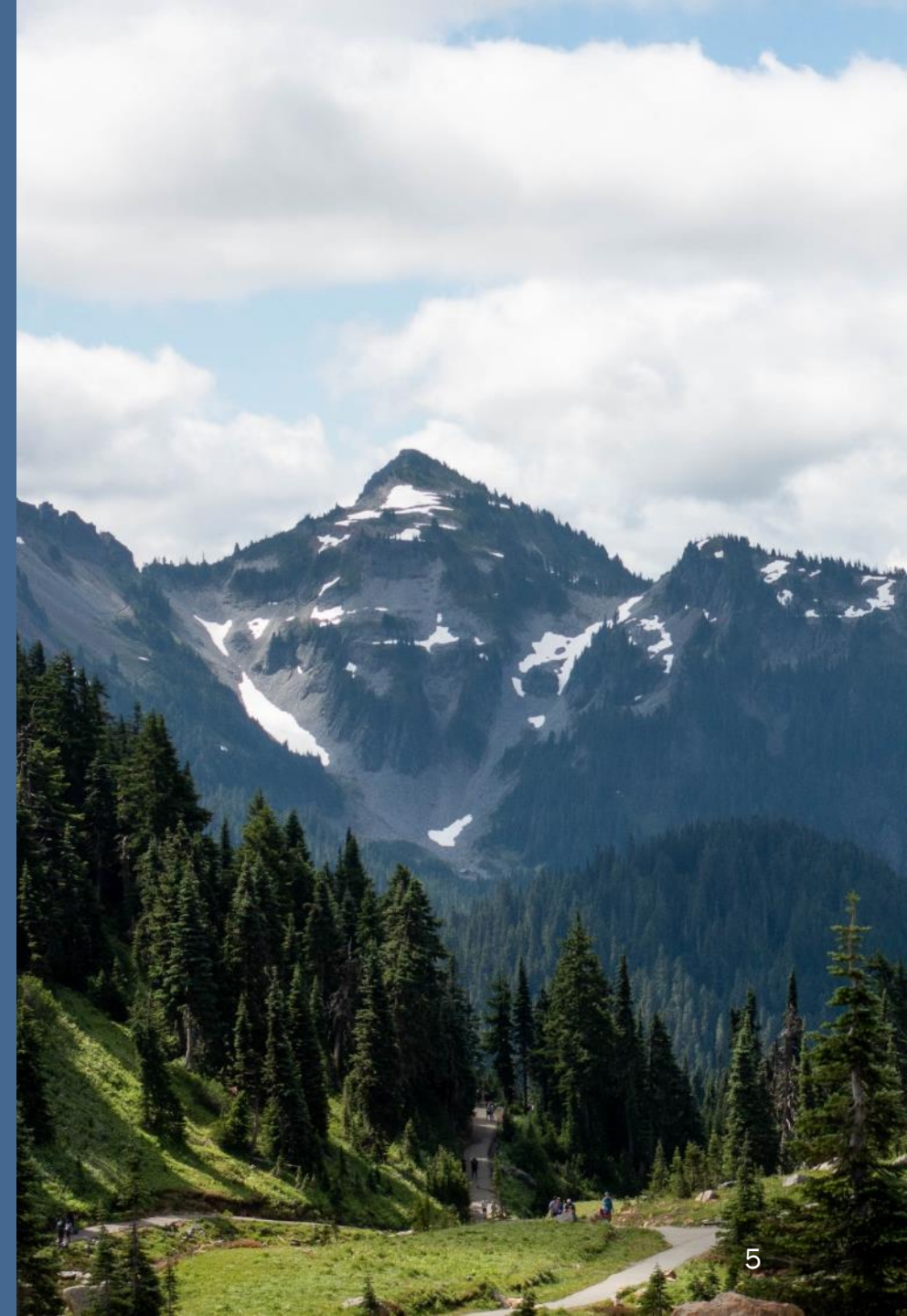


Takeaways

- Ecology continues to be concerned for the Yakima region and is closely watching the North and Central Cascades and Okanagan/ Methow basins.
- Emergency drought response tools continue to be available.
- Ecology is closely monitoring conditions and coordinating with partners.



Drought Declaration Process



Drought Conditions

Drought conditions - two requirements:

- 1. Hydrologic threshold** – An area is receiving, or is projected to receive, less than seventy-five percent of normal water supply.
- 2. Hardship threshold** – Water users and the environment are or are expected to experience undue hardship.

See: [RCW 43.83B.405](#) and [WAC 173-166-050](#).

Water Supply Factors

Water
year to
date

- Snowpack
- Precipitation
- Temperature
- Soil moisture

Hydrologic
threshold
for
drought
was met

Forecasts

- Streamflow
- Precipitation
- Temperature
- Soil moisture

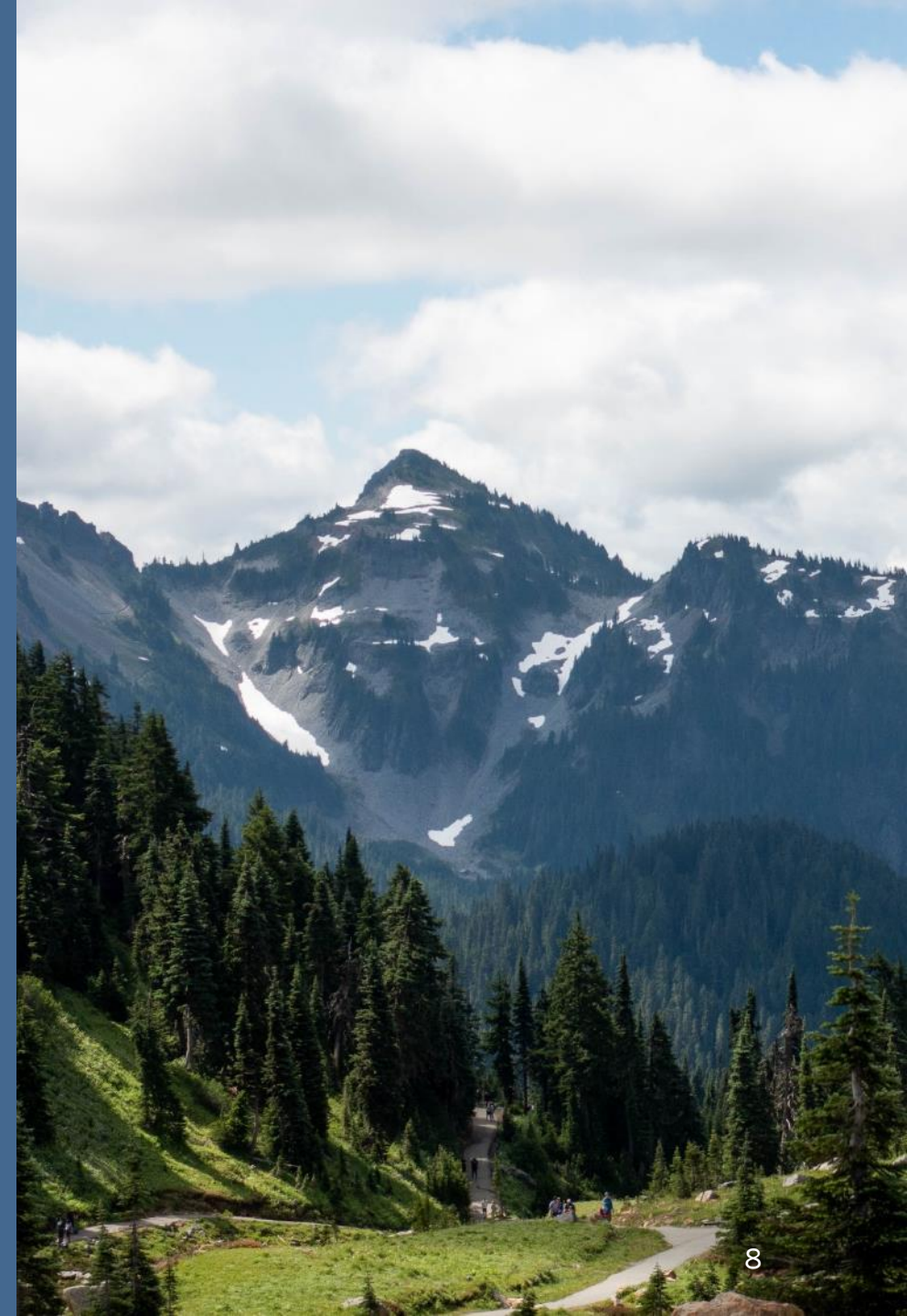
Feb 2, 2024



Hurricane Ridge Webcam, National Park Service
Olympic National Park



Implications of a Drought Declaration



What Does a Declaration Do?

Provides Ecology with the authority to:

1. Expedite emergency water transfer applications.
2. Establish a grant program to mitigate hardships to water users and the environment.



Drought Response Funding

Grants to governmental entities:

- Federally recognized Tribes
- Counties, cities, and towns
- Water and sewer districts
- Public utility districts
- Port districts Conservation districts Irrigation districts
- Watershed management partnerships

Additional Implications

State agencies – Ecology can enter into interagency agreements to fund drought response efforts

- Examples: DOH, DFW, SCC, AGR

Eligibility for federal drought funding

Important communications tool

Example Drought Response Grant Projects

Agriculture or livestock

- Purchasing or leasing water or water rights
- Replacing intakes, pumps, and related accessories

Public water supply

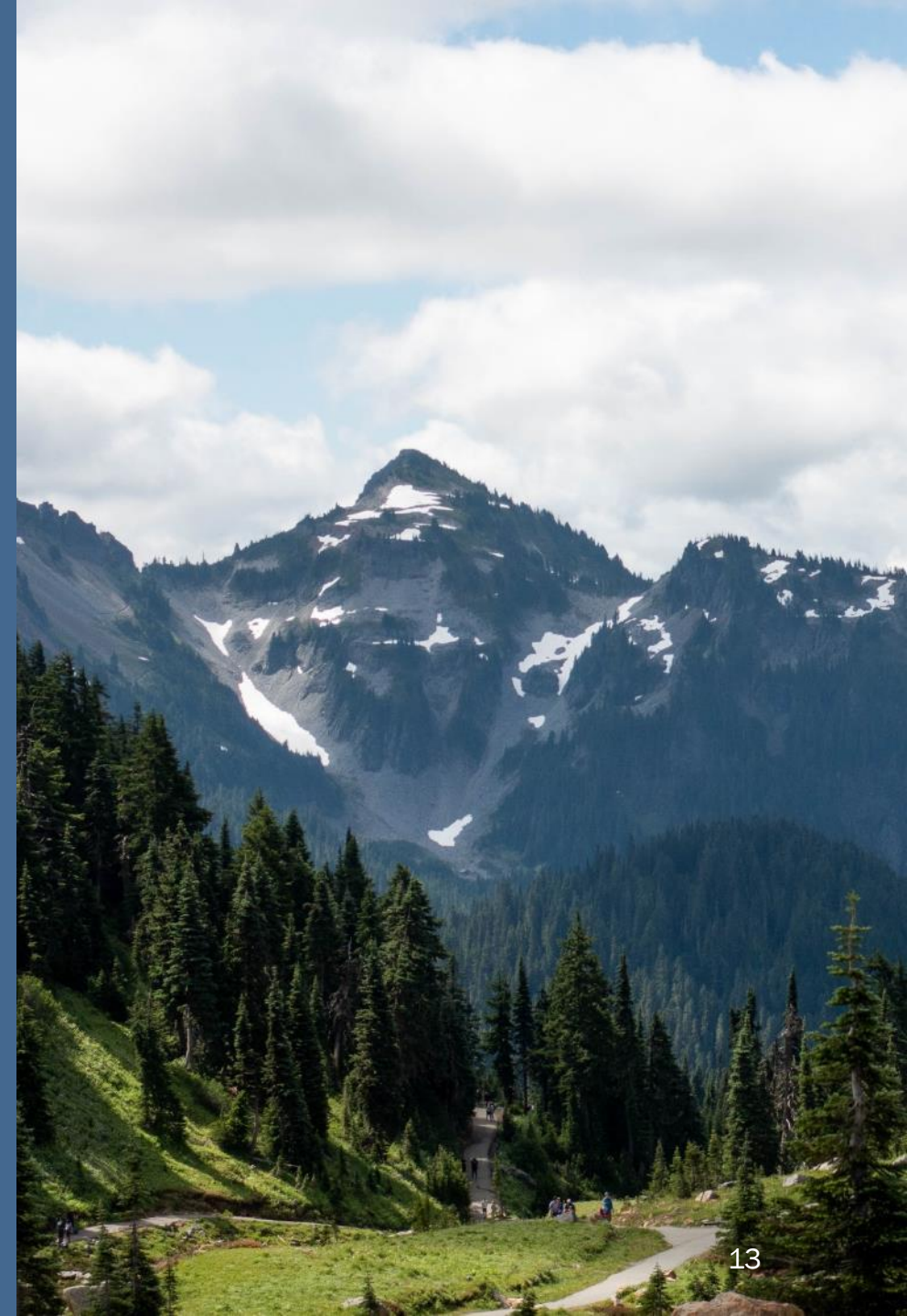
- Transporting emergency water supplies
- Implementing water conservation strategies

Fisheries and wildlife

- Eliminating migration barriers
- Modifying stream channels adjacent to a hatchery



Water Supply Outlook

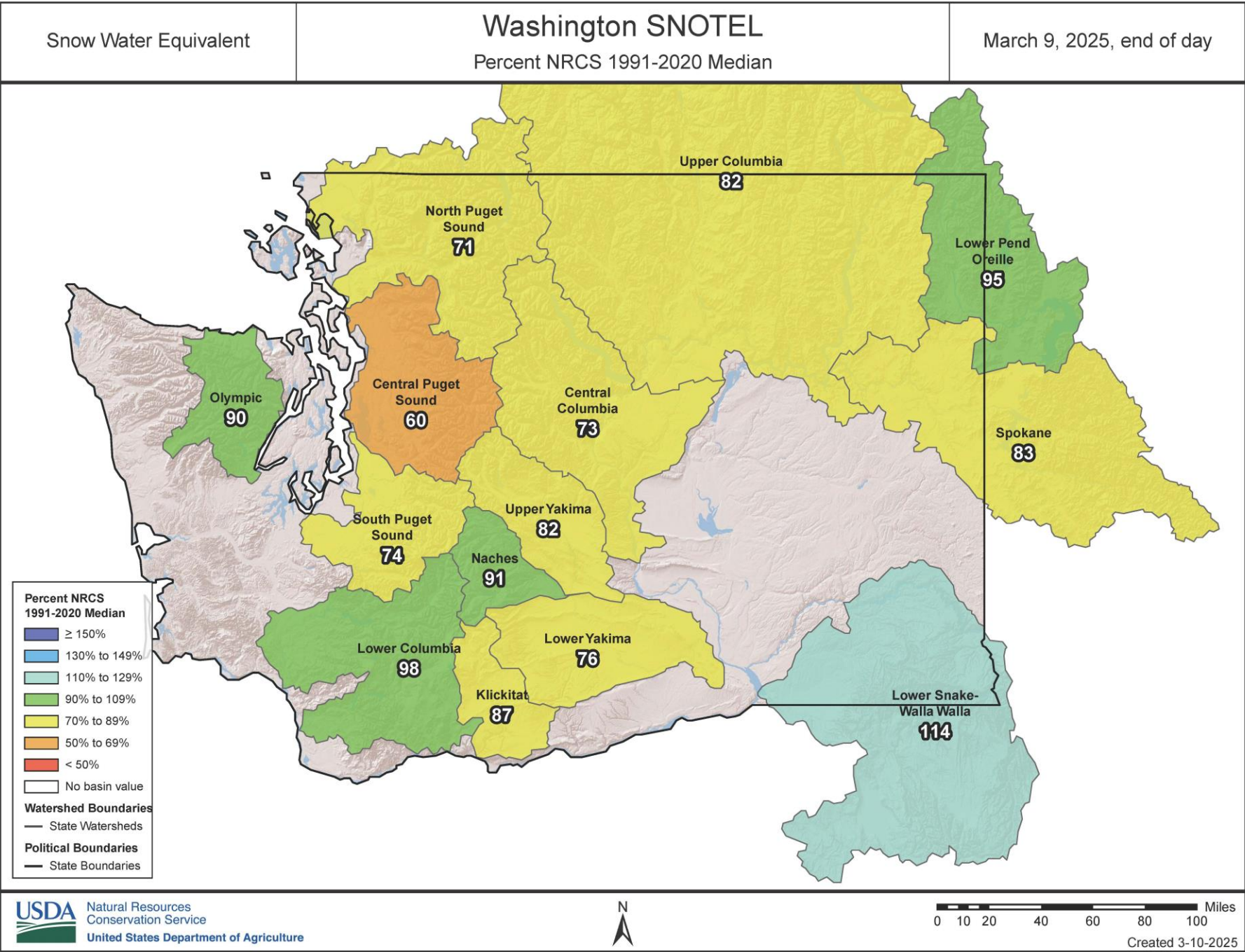


La Niña still here, for now

La Niña

- Wetter, colder winters – in general.
- This La Niña is weak = less of an impact on our weather.





Snowpack Conditions

Statewide SWE is at 80%.

Statewide precipitation today is at 84%.

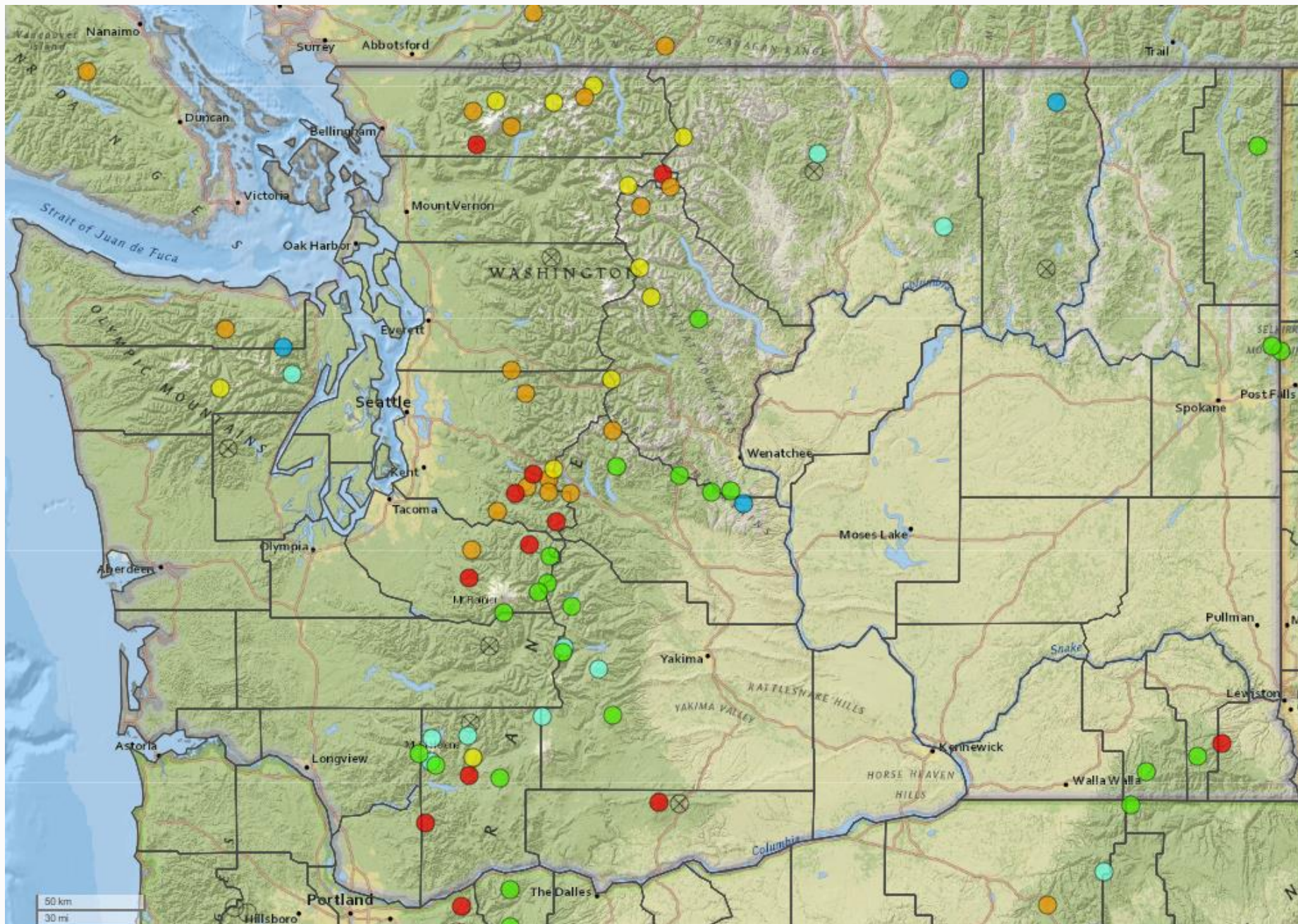
This date in 2016,
Statewide SWE was 102%
& precip was at 129%

(Source: NRCS).

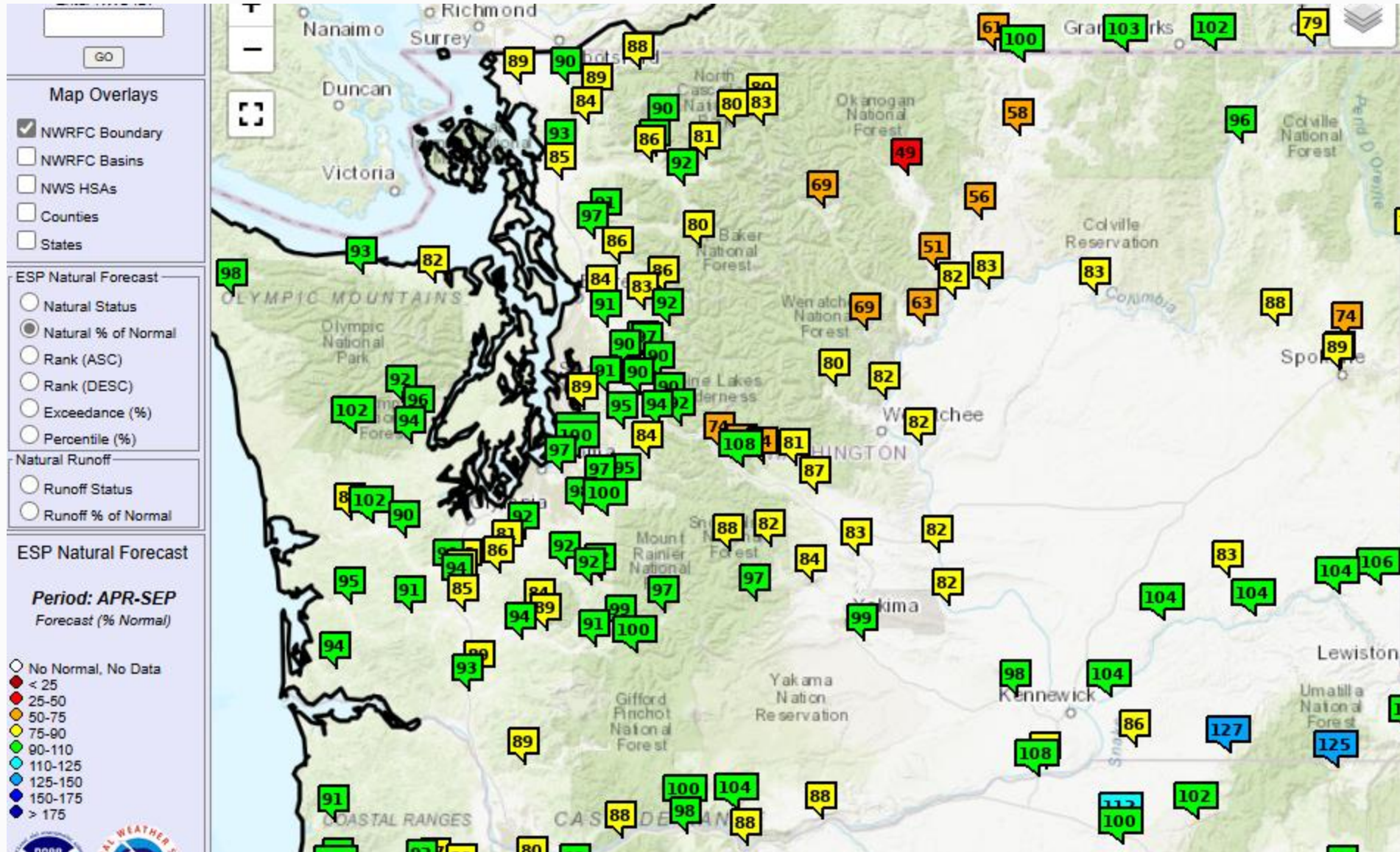
Snowpack Conditions

SNOTEL sites tell a more nuanced story.

(Source: NRCS).

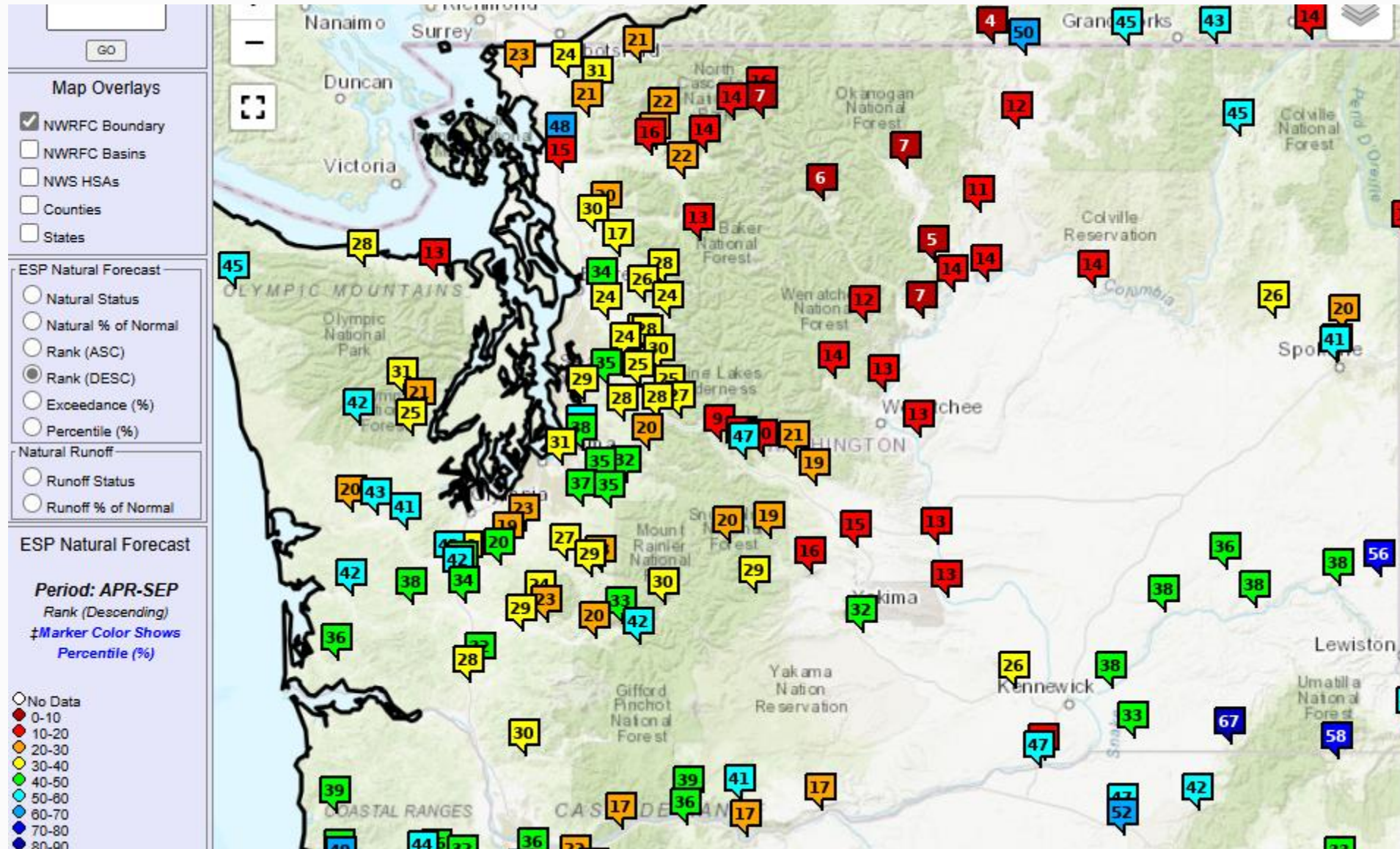


Streamflow natural forecast as % of normal



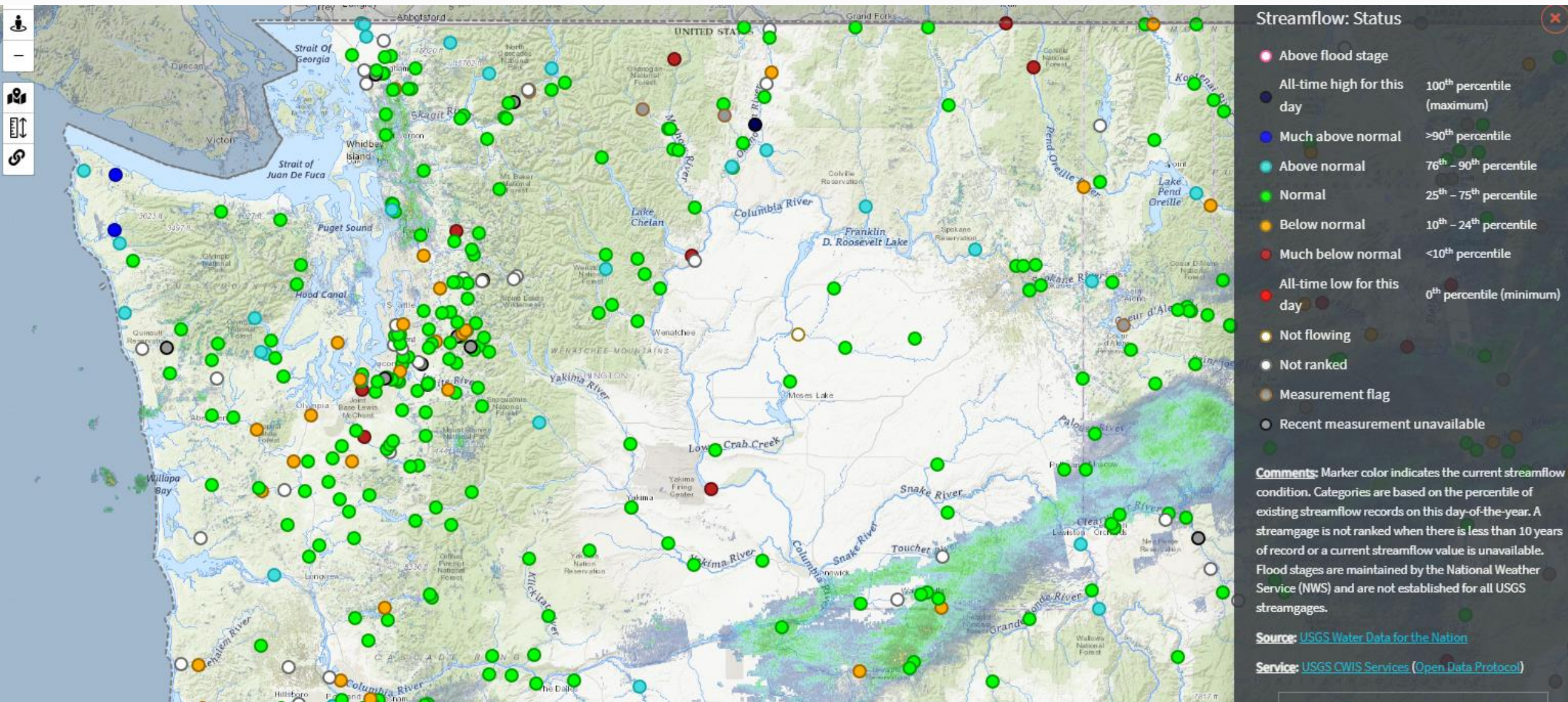
Source: [NW River Forecast Center](#)

Rank compared to historical record



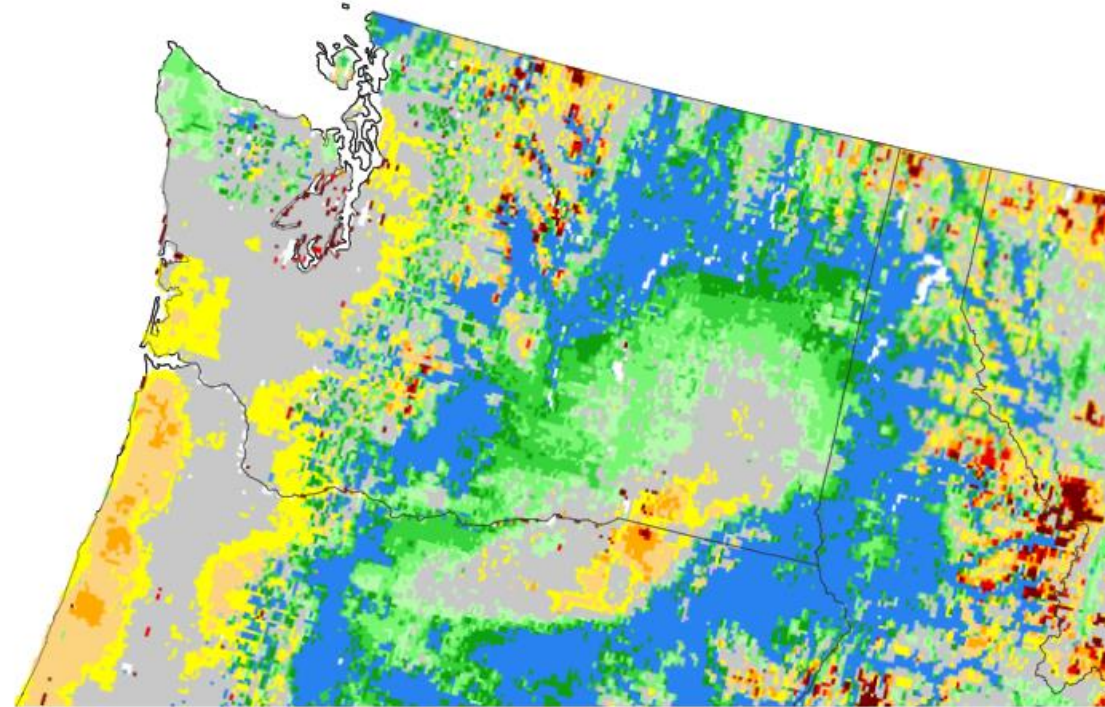
Source: [NW River Forecast Center](#)

USGS Stream Gauges



Soil Moisture

0-100 cm Soil Moisture Percentile



0-100 cm Soil Moisture Percentile



This NASA SPoRT-LIS soil moisture map shows the moisture content of the top 100 cm of soil compared to historical conditions (1981–2013), based on the Noah unified land surface model. Red and orange hues indicate drier soils, while greens and blues indicate greater soil moisture.

Source(s): NASA

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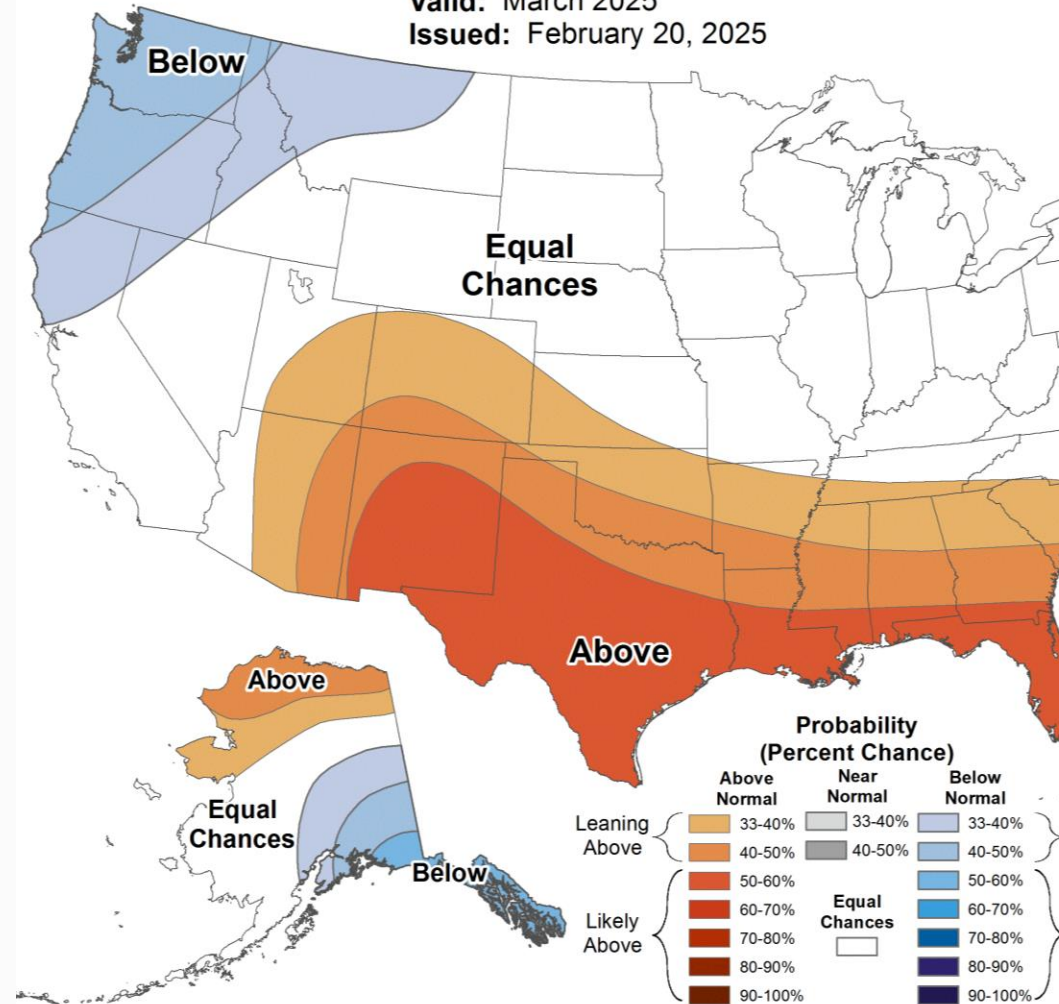
Data Valid: 03/09/25

Conditions: Month Outlook



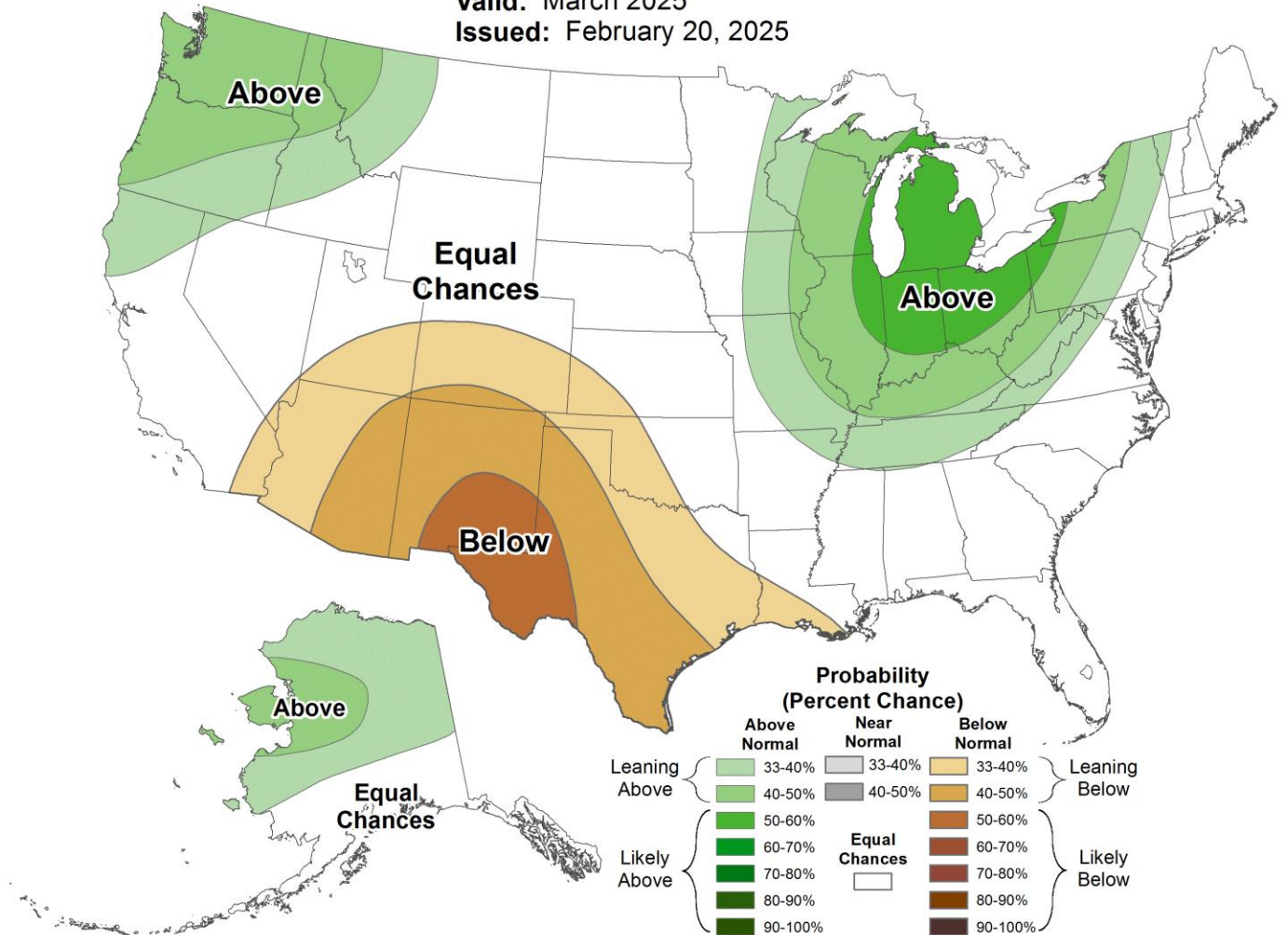
Monthly Temperature Outlook

Valid: March 2025
Issued: February 20, 2025



Monthly Precipitation Outlook

Valid: March 2025
Issued: February 20, 2025

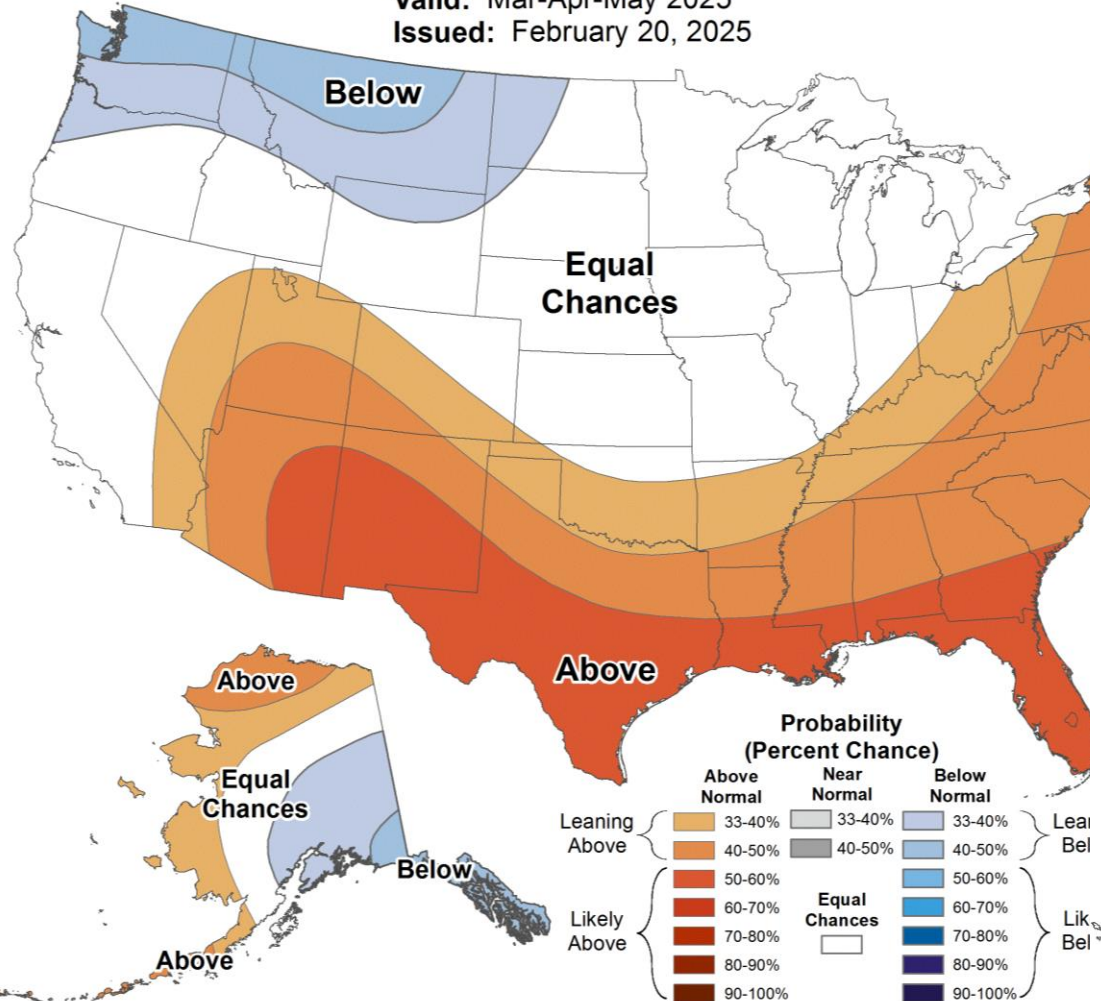


Conditions: Three-month Outlook



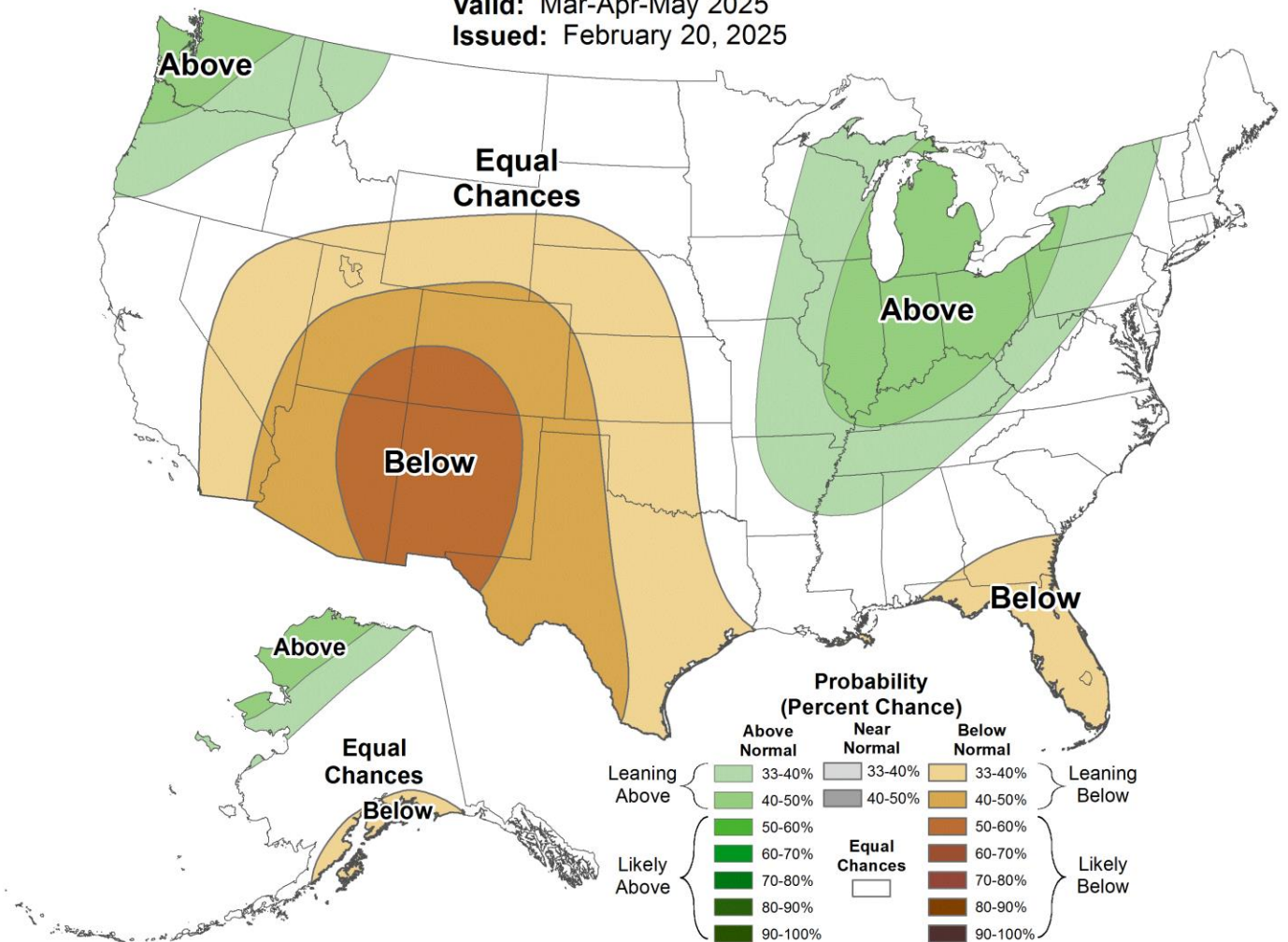
Seasonal Temperature Outlook

Valid: Mar-Apr-May 2025
Issued: February 20, 2025



Seasonal Precipitation Outlook

Valid: Mar-Apr-May 2025
Issued: February 20, 2025

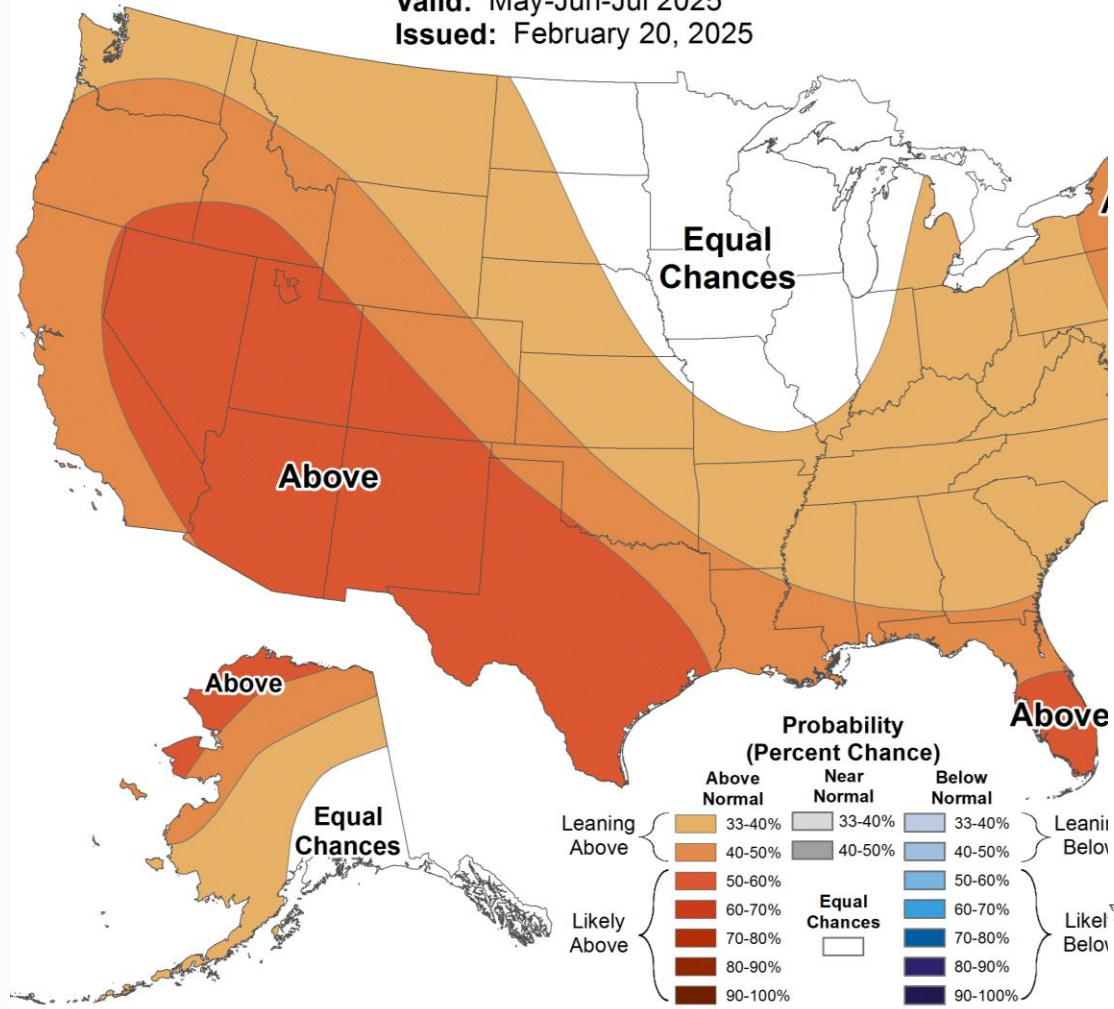


Conditions: Early Summer Outlook



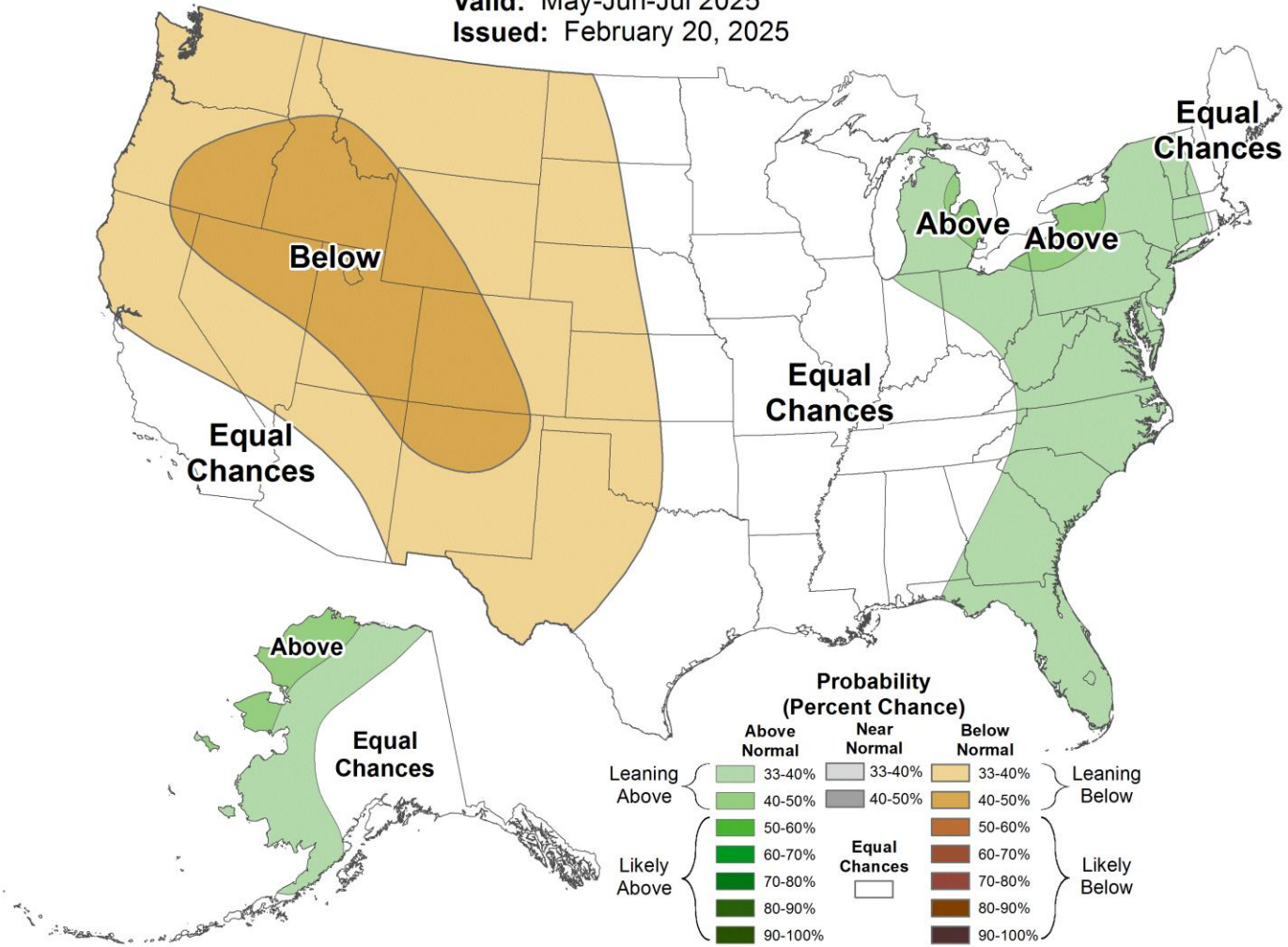
Seasonal Temperature Outlook

Valid: May-Jun-Jul 2025
Issued: February 20, 2025



Seasonal Precipitation Outlook

Valid: May-Jun-Jul 2025
Issued: February 20, 2025

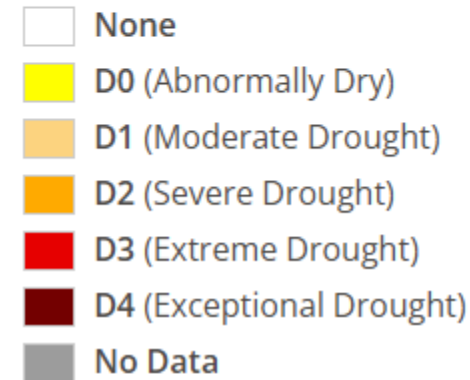


Current US Drought Monitor

Map released: Thurs. March 6, 2025

Data valid: March 4, 2025 at 7 a.m. EST

Intensity



*The Drought Monitor does not reflect snowpack impacts on water supply as it's a on immediate conditions.

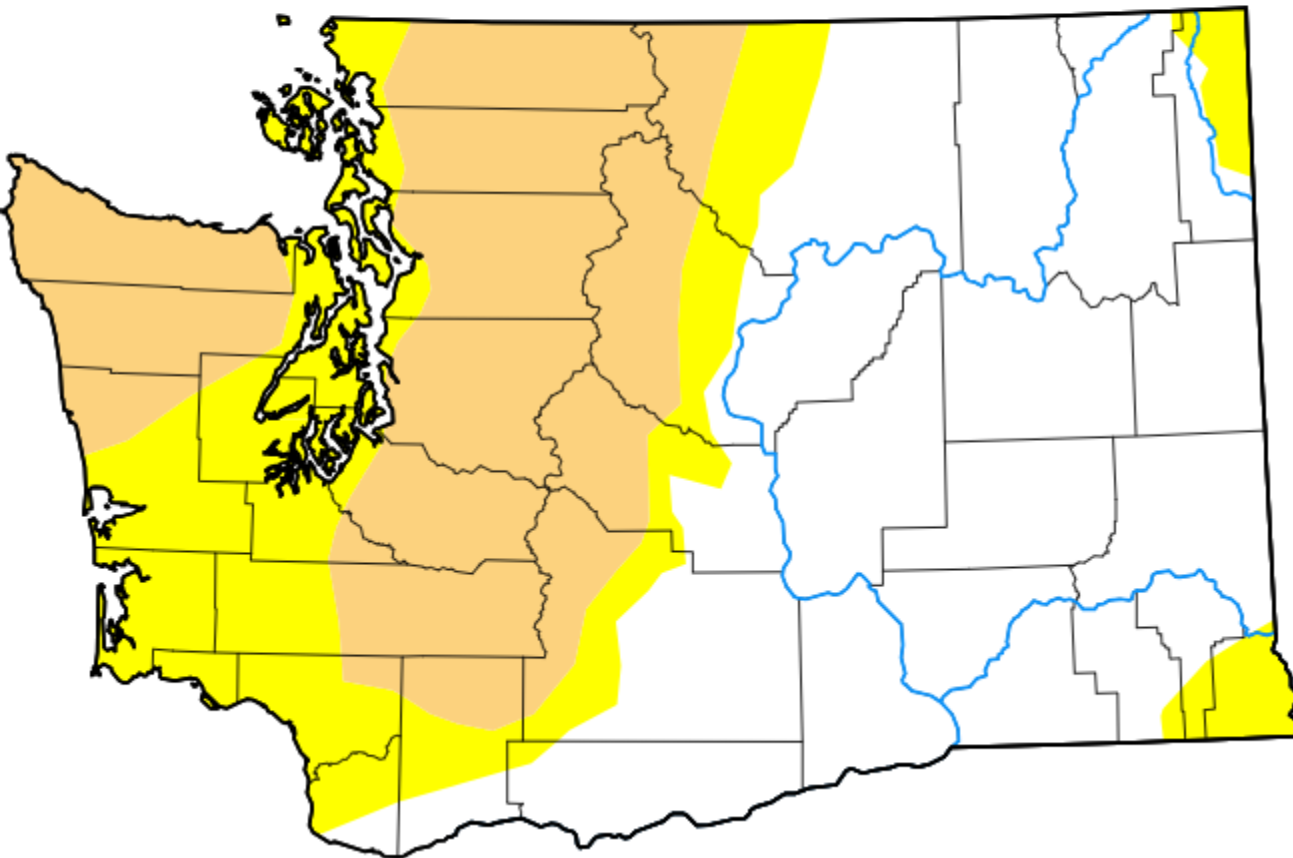
Authors

United States and Puerto Rico Author(s):

[Curtis Riganti](#), National Drought Mitigation Center

Pacific Islands and Virgin Islands Author(s):

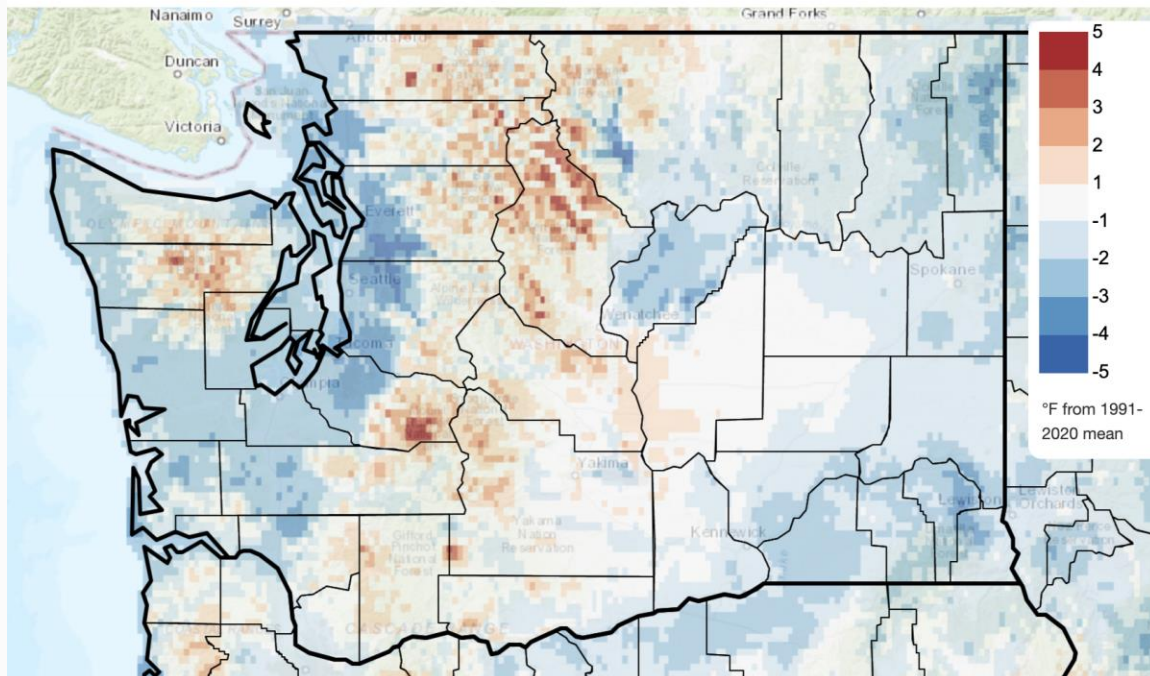
[Brad Rippey](#), U.S. Department of Agriculture



January 2025

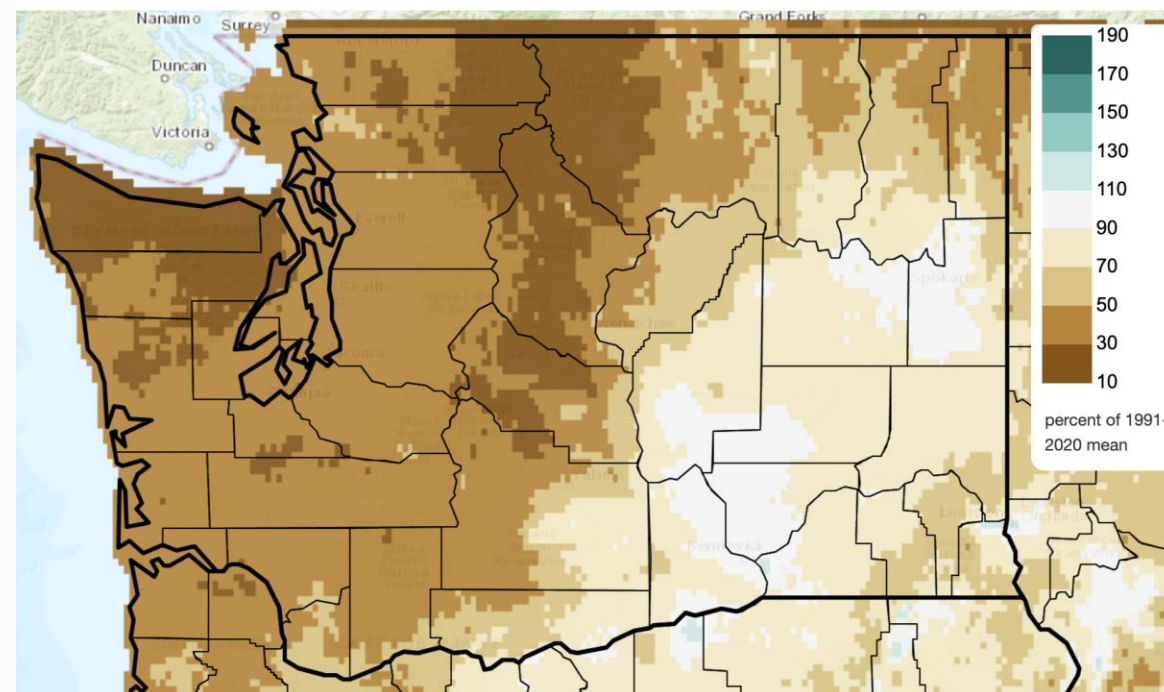
Mean Daily Temperature Anomaly, Last Full Month

2025/01/01 - 2025/01/31



Total Precipitation Anomaly, Last Full Month

2025/01/01 - 2025/01/31



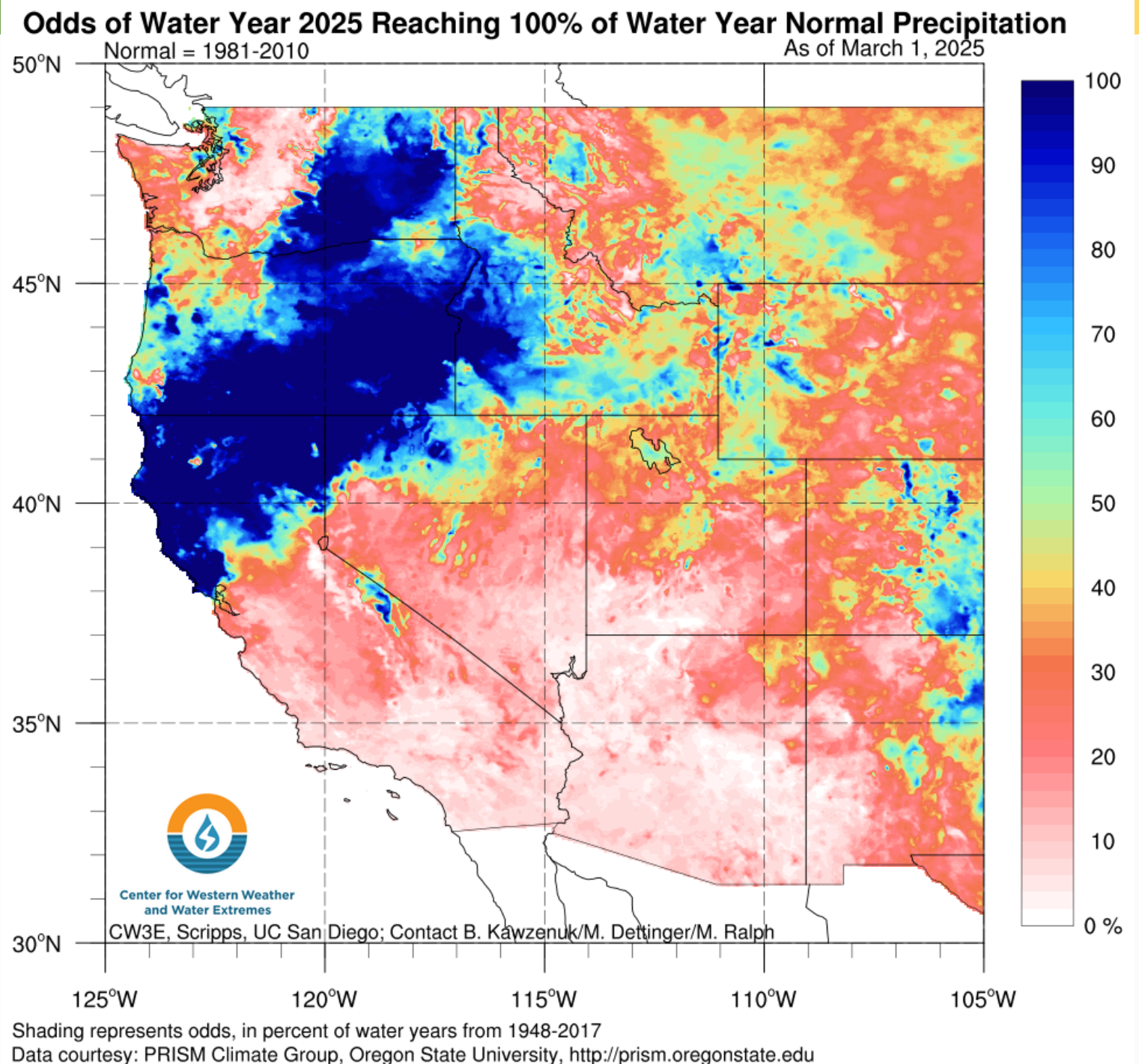
Averaged statewide, Jan temperatures were near-normal (-0.6°F)*

Averaged statewide, Jan precipitation much below normal (35% of normal), ranking as the 5th driest

*Records since 1895; Normal is 1991-2020

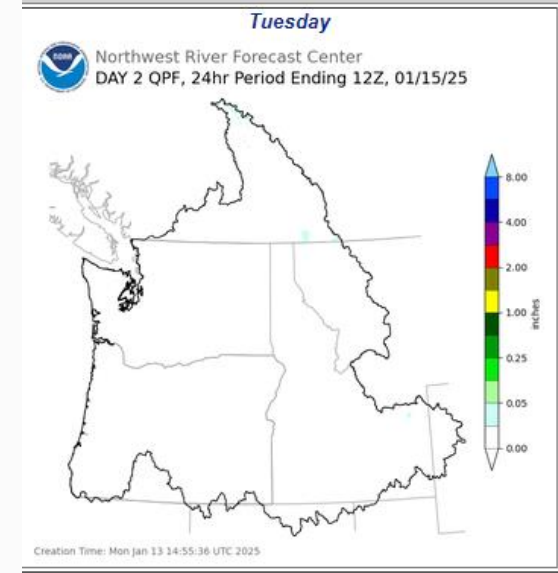
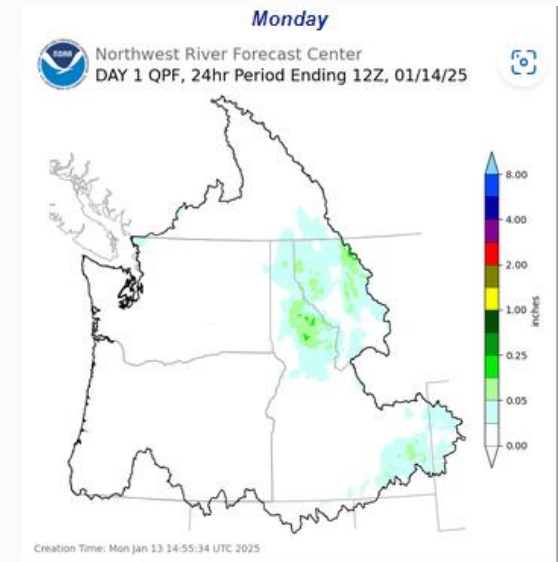
Odds of reaching Normal Water Year precipitation

January is usually the third wettest month (behind Dec and Nov).



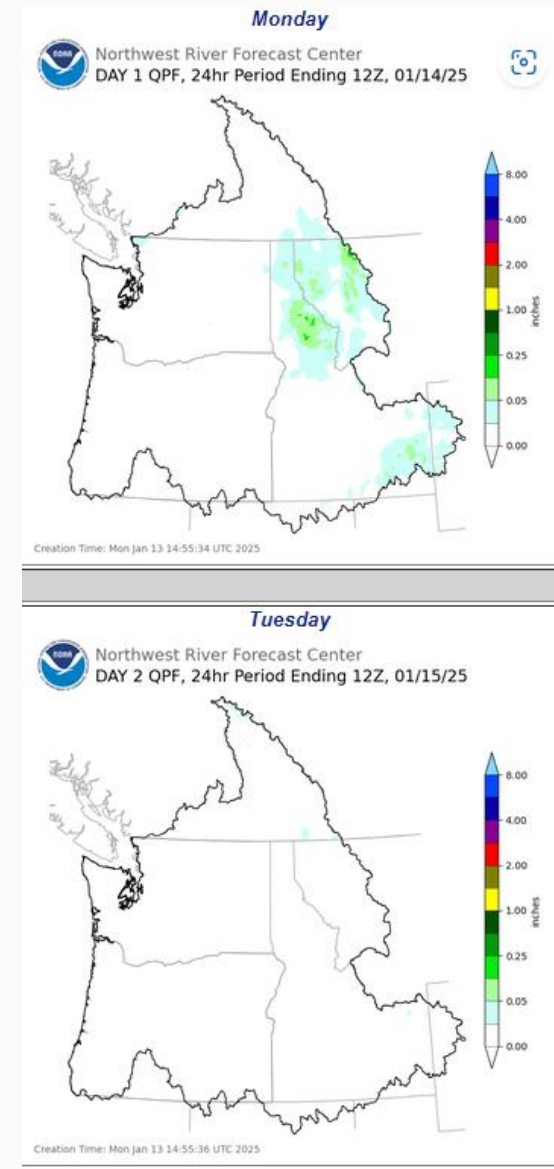
Water Supply Conditions

- Water year precipitation has been drier than normal across western WA and above normal across eastern WA so far.
 - January was extremely dry statewide (5th driest).
- Precipitation has been wetter than normal across eastern WA and near-normal to slightly below normal in western WA so far.



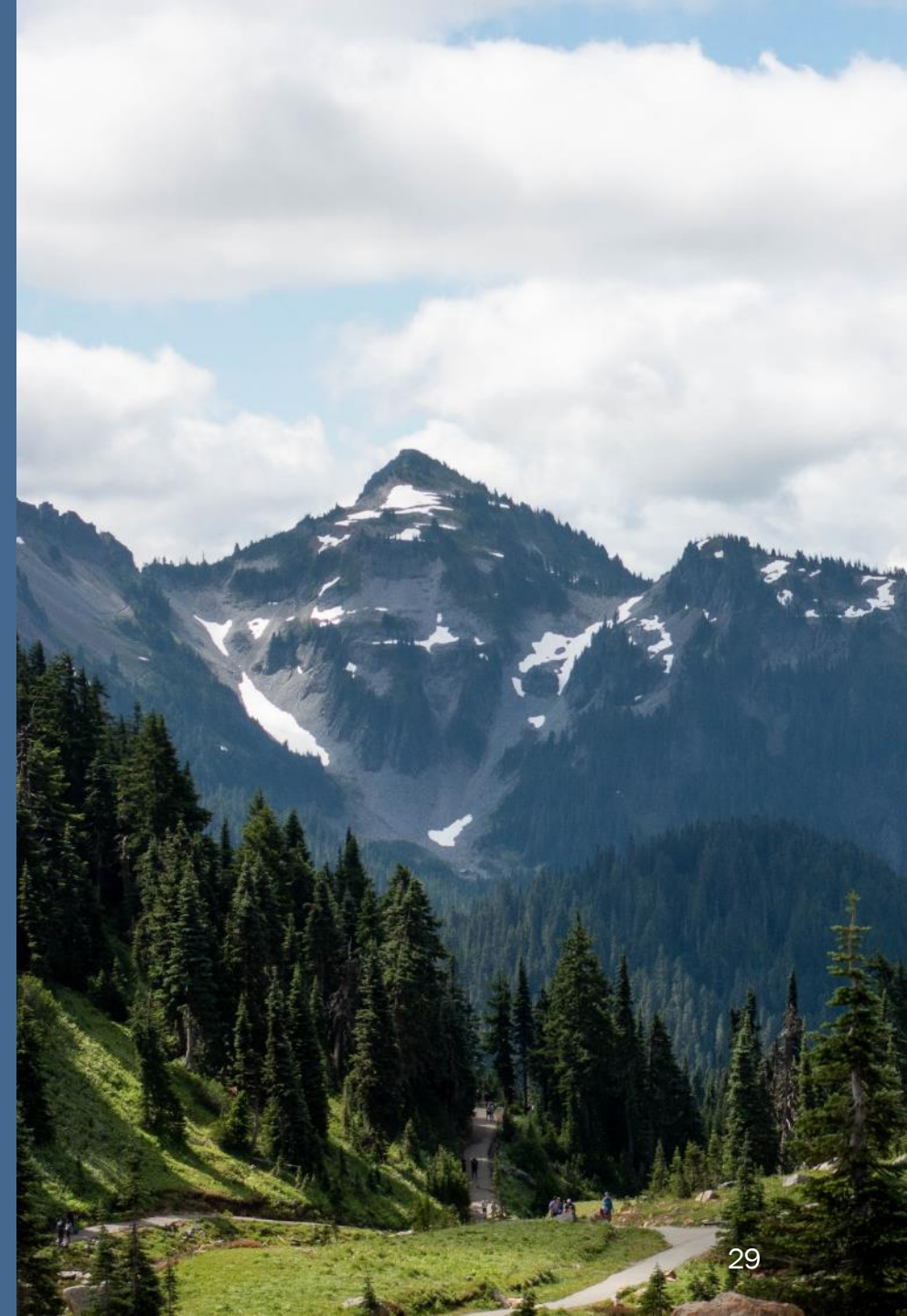
Water Supply Conditions

- La Niña continues to be weak and expected to depart between March and May.
- BOR Yakima storage is at 40.2%, as compared to average for this time of year.
 - BOR announced on March 6 that the March estimate for TWSA (Total Water Supply Available) is 48%.





Ongoing drought management



Drought response continues

The Drought declaration is currently in place till April 2025.

- Ecology continues to evaluate conditions throughout this winter.



Drought response continues

Drought response funding remains open.

- Ecology re-issued the Emergency Drought Funding rule December 11.
- Any grant applications this winter must be to address continued drought impacts to water supply from 2024 drought conditions.



Takeaways

- Ecology continues to be concerned for the Yakima region and is closely watching the North and Central Cascades and Okanagan/ Methow basins.
- Emergency drought response tools continue to be available.
- Ecology is closely monitoring conditions and coordinating with partners.

Communications

- [WSAC website](#) updated with meeting materials and presentation recordings.
- Latest blog post: [Washington water supply update - Washington State Department of Ecology](#)
- Drought Response website: [Drought Response - Washington State Department of Ecology](#)



Questions?



Thank you

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